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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,209	04/22/2004	Chang Nam Kim	K-0632	5528

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EXAMINER

TADESSE, YEWEBDAR T

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 05/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/829,209

Applicant(s)

KIM, CHANG NAM

Examiner

Yewebdar T. Tadesse

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-2 and 6-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al (4,001,842) in view of Im et al (US 2002/0067117). With respect to claims 1, 3-11 and 13-17, Suzuki et al discloses (see Abstract and Figs 1-2) a shadow mask (25) for fabricating an organic electroluminescent device (screen), comprising: a plurality of striped slots or pattern holes aligned in one direction (apertures 31 having a pattern, see Figs 1-2). Boudreau lacks teaching striped slots or holes having a plurality of inclined surfaces formed on each side of each upper and lower portion of each slot and wherein the upper and the lower inclined surface areas are different from each other with width or height. However, in the production of mask assembly it is well known to form slots having inclined surfaces formed on each side of slot or hole; for

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instance - Im et al discloses (see Figs 9A-9C) a mask assembly having slots or holes having inclined upper and lower surfaces (92a, 93a and 92b, 93b respectively) with different width and height (see Fig 9A for surfaces 92a, 92b, 93a and 93b of the upper and lower surfaces of strips 92 and 93 of the slot 91 having different size inclined surfaces by etching the surfaces less or more, see paragraph 9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include slots having a plurality of inclined surfaces with different width and height formed on each side of the upper and lower portion of each slot in Boudreau to prevent an electron beam from colliding with the strip of the slot as taught by Im et al.

As to claims 2 and 12, in Suzuki et al a plurality of bridges (32) dividing the striped slots in pixel units (apertures 31 arranged in rows being separated with bridge) and the hole patterns has a shape and a size corresponding to a pixel region (color-emitting stripe 24) of the organic electroluminescent device.

4. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al (4,001,842) in view of Im et al (US 2002/0067117) as applied to claim 2 above, and further in view of Kawamura et al (US 5,523,647). Suzuki et al lacks teaching bridges having a plurality of inclined surfaces formed on each side. Kawamura et al discloses (see column 5, lines 13-17 and 40-50, Figs 3b and 4) bridges (8f) having inclined upper and lower surfaces (cavities having concave sections) and wherein the thickness of the bridge (8f with thickness t_1) is smaller than of an area of the shadow mask having no inclined surface (grille 8e with thickness t_2). It would have been

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obvious to one of ordinary skill in the art at the time the invention was made to include bridges having a plurality of inclined surfaces formed on each side with a bridge having smaller thickness than that of the area of the shadow mask in Suzuki et al to attain high rigidity of a shadow mask or to diminish folding of the strips or grille.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yewebdar T. Tadesse whose telephone number is (571) 272-1238. The examiner can normally be reached on Monday-Friday 8:00 AM-4: 30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Yewebdar T. Tadesse
YTT

Chris Fiorilla
CHRIS FIORILLA
SUPERVISORY PATENT EXAMINER
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